

3 Physical Setting

3.1 Land Use

Plant 2 is bounded by industrial property to the north, including Praxair Surface Technologies (a subsidiary of Praxair, which spun-off from Union Carbide in 1992) north of which is the Indianapolis Motor Speedway; a former railroad right-of-way and Electric Steel Castings Company and 10th Street to the south (beyond which is Allison Plant 3); Main Street to the west (beyond which are commercial/retail facilities and residences); and a railroad right-of-way property and lime slurry piles, Polco Street and Dry Run Creek to the east (Drawing 1). Residential properties are located within one-quarter mile west of Plant 2.

Plant 12/14 is bounded to the east by Holt Road, beyond which are a commercial facility, a city park and a residential area. A residential area is to the south of Plant 12/14. To the west of Plant 12/14 is Allison Plant 3 and to the north of Plant 12/14 is a Speedway Super America gas station and Crystal Clean (an oil and solvent reclaim and industrial degreasing service provider), beyond which is the Marathon Ashland Petroleum Speedway terminal.

A residential area and Allison Plant 2 are present north of Plant 3. Big Eagle Creek borders the Plant 3 southern property boundary, south of which is a public golf course. Directly to the east of Plant 3 is Plant 12/14. To the west of Plant 3 are residential and commercial properties.

A majority of the facility is either occupied with buildings or is paved. Two baseball diamonds are located to the west of Plant 3 and appear to be actively used. Drawing 6 shows an overview of the land cover at the Site.

3.2 Water Use and Water Supply Wells

A review of the available water well records maintained by the Indiana Department of Natural Resources (IDNR) was conducted to identify any wells in the area surrounding the Site. All available well construction logs were examined. The search included both low capacity wells (<70 gallons per minute [gpm]) within a 1/4-mile radius and high capacity wells (>70 gpm) within a 1-mile radius.

Records for 36 low capacity wells were identified within a 1/4-mile radius of the Site. The depth of the wells ranged from 36 ft to 270 ft below ground surface (bgs). Seven

**RCRA Corrective
Action
Description of Current
Conditions**

General Motors Corporation
Powertrain - Allison
Transmission

USEPA ID IND006413348
and IND000806828

of the wells were completed in bedrock that was encountered at depths ranging from 80 to 127 ft bgs, and the other 29 wells were completed in unconsolidated sand and gravel. Groundwater flow in the unconsolidated deposits has been shown to be to the south toward Big Eagle Creek. Twenty-eight of the wells in unconsolidated sand and gravel are downgradient of the Site. Drawing 7 shows the locations of off-site water supply wells. A copy of off-site water well records is included in Appendix C.

Twenty-three high capacity wells are located within one-mile of the Site. Fifteen of these high capacity wells are/were located at the facility. These wells range in depth from 57 ft to 121 ft bgs. Bedrock was not encountered in any of the wells. Two of off-Site wells are located downgradient (south) of the Site. The locations of the water supply wells at the Site are shown on Drawing 3 and the off-Site wells are shown on Drawing 7. The available well logs are included in Appendix D.

Historically there were fifteen water supply wells present at Plant 3 (PW-1 through PW-12) and three water supply wells at Plant 2 (PW-21, PW-22 and PW-23). Currently there are seven wells that are used. The two water supply wells at Plant 2, PW-22 and PW-23 were abandoned in 2003. In 2004, groundwater production from each of the operating wells was as follows:

- √ PW-1B: 362,000 gallons.
- √ PW-2: 68,000 gallons.
- √ PW-5A: 10,839,000 gallons.
- √ PW-7A: 13,549,000 gallons.
- √ PW-10: 4,065,000 gallons.
- √ PW-11: 29,063,000 gallons.
- √ PW-12: 10,162,000 gallons

Groundwater from the water supply wells is treated through a sand filter prior to being used at the facility for production purposes.

An additional water source for the Plants is provided by stormwater collection basins. During rain events, stormwater is diverted to the collection basins. Some of this collected stormwater is treated through sand filters at waste treatment (AOI 19) and is

RCRA Corrective Action Description of Current Conditions

General Motors Corporation
Powertrain - Allison
Transmission

USEPA ID IND006413348
and IND000806828

supplied to the facility for production purposes. The remaining stormwater is discharged to Big Eagle Creek, Little Eagle Creek or Dry Run Creek through the outfalls illustrated in Drawing 5. Table 6 provides a summary of the water withdrawal from the water supply wells, as well as from the stormwater collection system.

Plant 2, Plant 3 and Plant 12/14 use city-supplied water for non-production purposes (drinking water, showers, etc.). Plant 2, Plant 3 and Plant 12/14 were connected to the Town of Speedway water utility when each plant was constructed.

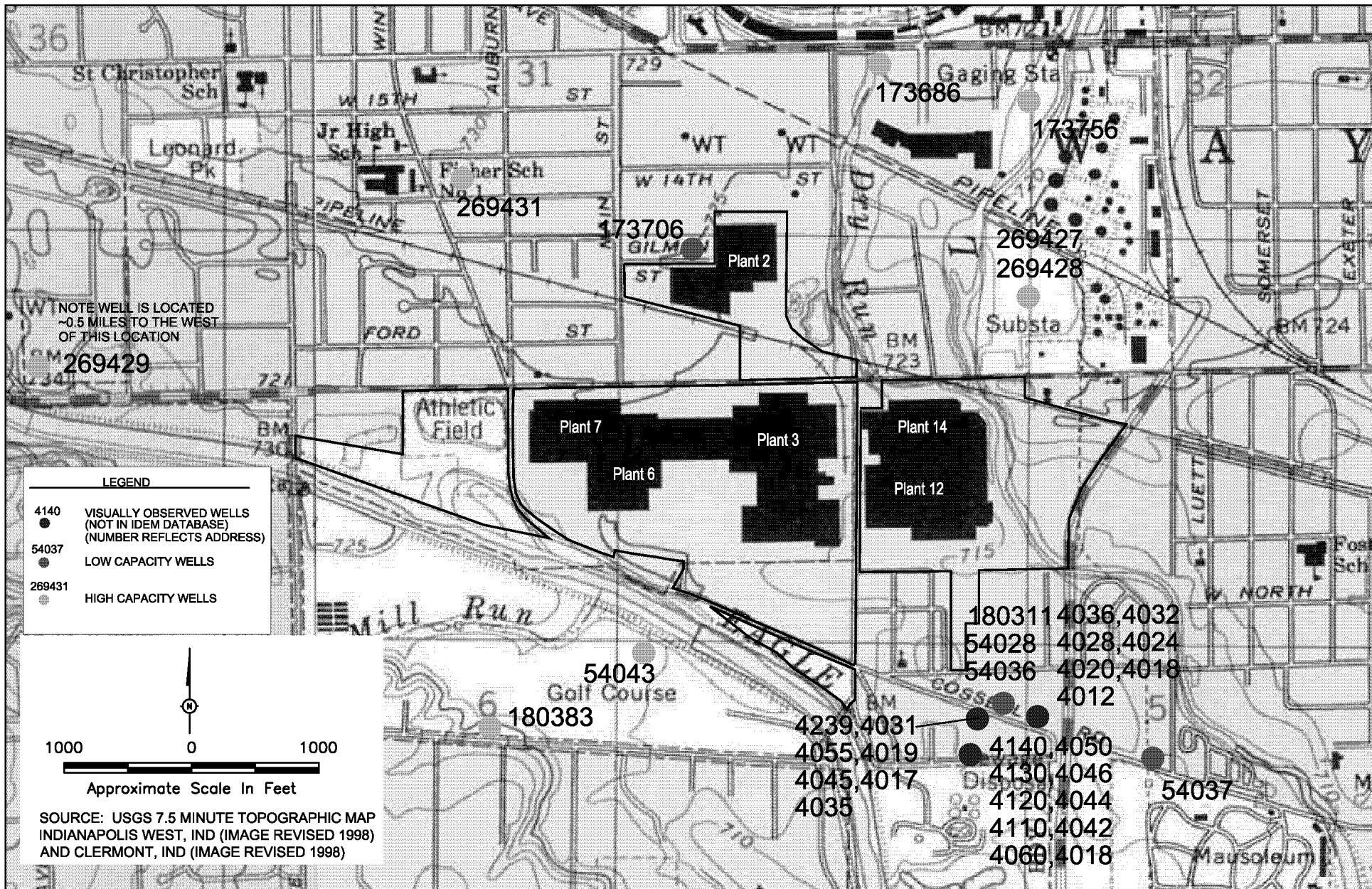
Based on well field protection district maps published by the City of Indianapolis Department of Metropolitan Development, the Site is not located within a well field protection district. According to the maps, the nearest well field protection area is located approximately 2 miles to the northeast (side gradient) of the Site.

Installation of a well in Marion County requires a licensed water well driller to obtain a well permit, which is signed by the Marion County Health Officer. The County Health Officer does not sign well permits for potable wells proposed for installation in a "No-Well Zone", since the groundwater in these areas is not considered suitable for use by humans for drinking, food preparation, washing or other direct human contact (Sec. 18-102 of the Marion County Health Code). The No-Well Zone areas located in Indianapolis are depicted on Drawing 8. As shown on this drawing, a portion of the Site (Plant 12/14) is within the No-Well Zone Area 2, which is shown in greater detail in Drawing 9.

In addition to reviewing available water well records, the Town of Speedway and City of Indianapolis Utilities were contacted to determine the source of residential supply water to the south of Plant 3 and Plant 12/14. It was determined that 25 parcels are not connected to the Town of Speedway or City of Indianapolis water and sewer utilities. A Drawing showing the locations of these parcels is presented in Appendix B as Drawing B-1b. Sixty-three of the parcels that are connected to the water utility are not being billed for sewer utility service. Residential water wells were observed at twenty-four parcels, one of which is connected to the water utility, but isn't being billed for sewer utility service (presented on Drawing B-1b).

3.3 Geology and Hydrogeology

The approximate Site elevation is 720 feet above mean sea level; the Site land surface is relatively flat and slopes gently to the southwest. The Site is located in the White River watershed, bounded by one tributary to the White River and transected by a



© 2004 ARCADIS G&M, Inc.

Area Manager
M. Flavin

Project Director
R. Walker

Task Manager
M. Fisherkeller

Technical Review
S. Fisher



251 East Ohio Street
Suite 800
Indianapolis, Indiana 46204
Tel: 317.231.6500 Fax: 317.231.6514
www.arcadis-us.com

GENERAL MOTORS - ALLISON TRANSMISSION
RCRA CORRECTIVE ACTION
DESCRIPTION OF CURRENT CONDITIONS
OFF-SITE WATER SUPPLY WELLS

SPEEDWAY, INDIANA

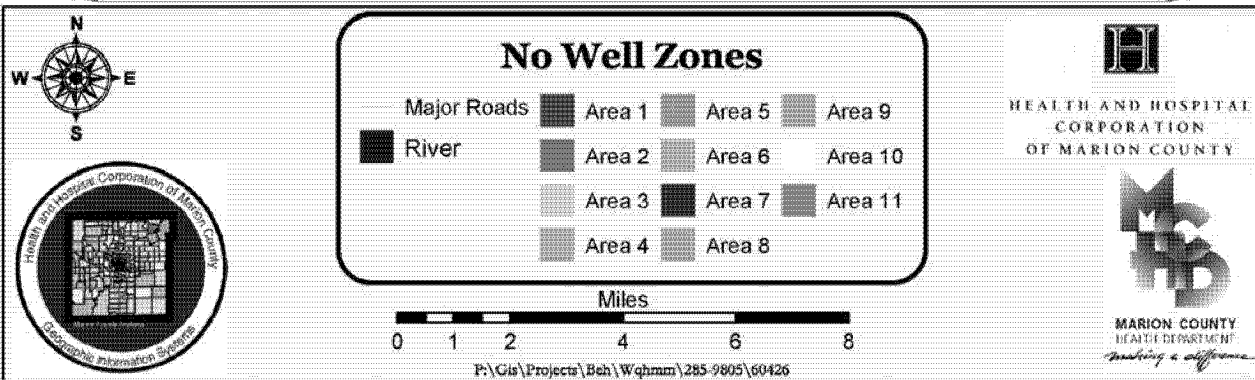
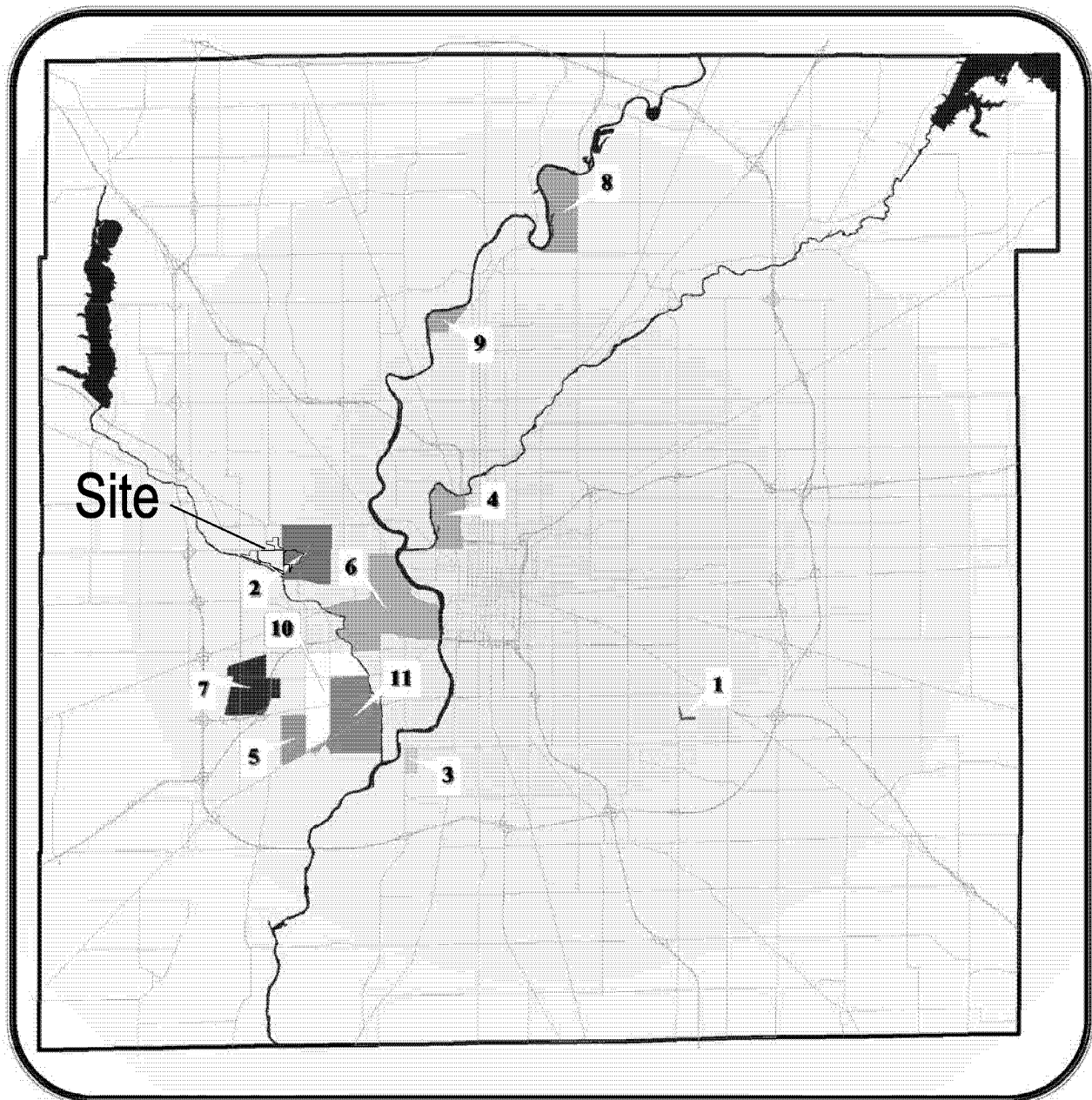
Project Number
IN000473.0016


Drawing Date
10/2004

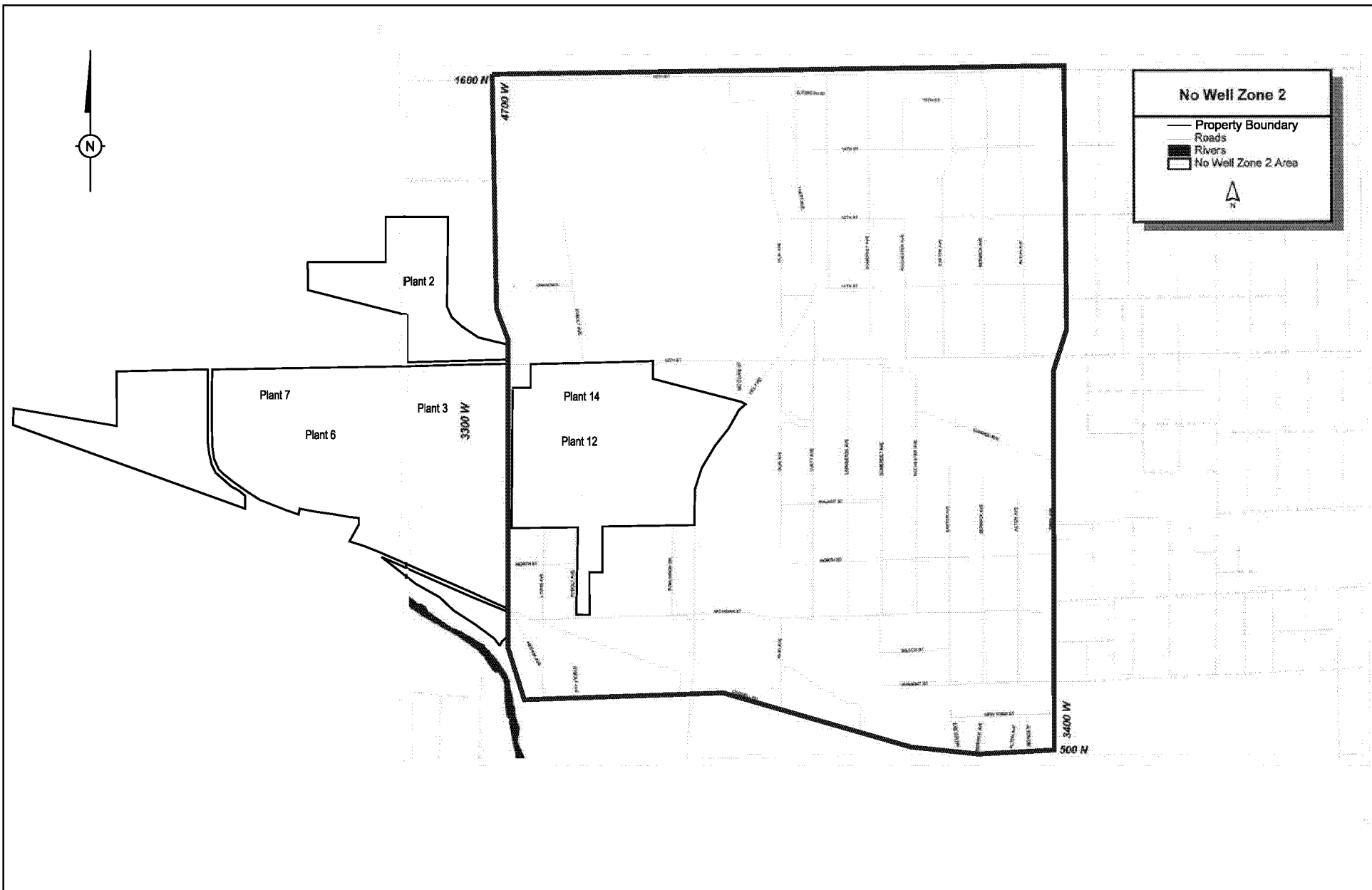
Drawing


7

AMMH002515



© 2004 ARCADIS G&M, Inc.	Area Manager M. FLAVIN	 251 East Ohio Street Suite 800 Indianapolis, Indiana 46204 Tel: 317.231.6500 Fax: 317.231.6514 www.arcadis-us.com	GENERAL MOTORS - ALLISON TRANSMISSION RCRA CORRECTIVE ACTION DESCRIPTION OF CURRENT CONDITIONS NO WELL ZONES SPEEDWAY, INDIANA	Project Number IN000473.0016
	Project Director R. WALKER			Drawing Date 10/2004
	Task Manager M. FISHERKELLER			Drawing 8
	Technical Review S. FISHER			



© 2004 ARCADIS G&M, Inc.	Area Manager	 <p>251 East Ohio Street Suite 800 Indianapolis, Indiana 46204 Tel: 317.231.6500 Fax: 317.231.6514 www.arcadis-us.com</p>	<p>GENERAL MOTORS - ALLISON TRANSMISSION RCRA CORRECTIVE ACTION DESCRIPTION OF CURRENT CONDITIONS</p> <p>NO WELL ZONE 2</p> <p>SPEEDWAY, INDIANA</p>	Project Number	IN000473.0016
	Project Director			Drawing Date	10/2004
	Task Manager			Drawing	9
	Technical Review				

